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ARCHER'S MANUAL

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Robert P. Elme

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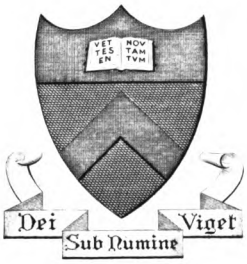

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Names	Gold 9	Red 7	White 5	Black 3	Blue 1	Total Hits	Value
A						28	118
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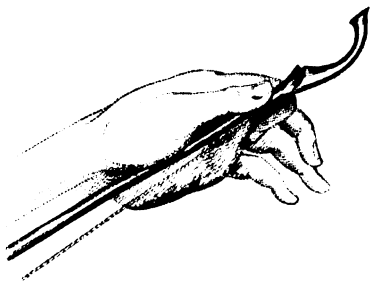

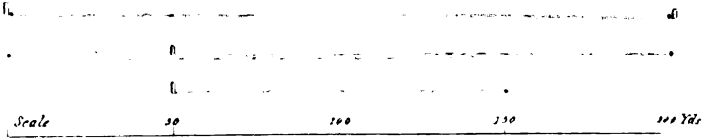

THE

ARCHER'S MANUAL:

OR

The Art of Shooting with the Long Bow,

AS PRACTISED BY

THE UNITED BOWMEN OF PHILADELPHIA.

Philadelphia:

R. H. HOBSON, 147 CHESTNUT STREET.

1830.

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Eastern District of Pennsylvania, to wit:

Be it remembered, that on the fourth day of May, in the fifty-fourth year of the independence of the United States of America, A.D. 1830, Richard H. Hobson, of the said district, has deposited in this office the title of a book, the right whereof he claims as proprietor, in the words following, to wit:

"The Archer's Manual: or the Art of Shooting with the Long Bow, as practised by the United Bowmen of Philadelphia."

In conformity to the act of the congress of the United States, entitled, "an act for the encouragement of learning, by securing the copies of maps, charts and books to the authors and proprietors of such copies during the times therein mentioned;" and also to the act, entitled, "an act supplementary to an act, entitled, 'an act for the encouragement of learning, by securing the copies of maps, charts and books to the authors and proprietors of such copies during the times therein mentioned,' and extending the benefits thereof to the arts of designing, engraving and etching historical and other prints."

D. CALDWELL,
Clerk of the Eastern District of Pennsylvania.

Philadelphia:
Printed by James Kay, Jun. & Co.
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INTRODUCTION.

The bow, as an implement of the chase, is of indefinite antiquity. In the most ancient written production, the book of Genesis, the bow and quiver of Esau are spoken of as things well known. The mythology of the Greeks ascribed its invention to Apollo; and Hercules, in the well known fable, killed the centaur with an arrow.

But however early the bow may have been known to the various nations of the earth, it is difficult to believe that their knowledge of it was derived from the same discovery. It is a characteristic of savage tribes, to adhere closely to the habits of their ancestors. The Indian nations who harassed the retreat of Xenophon, retain, to the present hour, the long bows and arrows of reed which that author has described. When, therefore, we discover that the bows and arrows of different districts differ

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very much in size, form and materials, and in the modes of using them, we are justified in the opinion, that they are of various origin,—and that their resemblance in a few particulars, has been altogether accidental. We cannot connect the history of Italy with that of our own country, merely because vases of the same beautiful proportions are found among the ruins of Herculaneum, and in the graves of the aboriginal Mexicans.

We know nothing of the form of the Jewish bow. That of Greece was nearly in the shape of the letter Sigma, and was strung with sinew. The Roman bow, as we find it on antique medals, resembled the Greek in its general character, but its angles were modified into graceful curves. The bow of the Centaurs is represented, among the sculptures of the Parthenon, as forming, when strung, about the fifth or sixth of a circle, like the bows of the modern English archers; but the ends, or nocks as we should term them, were bent backwards, so that the string when loosed, sprung only against a curved surface. The Parthians used short bows, which they discharged over the shoulder while retreating. The Chinese bow is of horn, of nearly the same form as the

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Greek: while that of Hindostan, of thick, strong reed, is, when unstrung, nearly straight. The South Sea Islanders, and many of the African tribes, use a bow of very hard wood, about five feet in length, and entirely similar in form to the English bow, but strung with sinew.

The materials, of which bows are made, are almost equally various. The bow of one nation is of horn, united by firm ligatures:—that of another, using the same material, has the handle of wood:—a third is of wood altogether:—while many among the rudest, as among the most refined nations, employ two materials, one to give elasticity, and the other toughness.

The arrows are diversified in like manner. Some, as the African and those of the Sandwich Islanders, are short, heavily armed with barbed heads, and without feathering:—those of the East Indies generally are made of cane or reed, very long, and profusely feathered:—and we have ourselves seen, in the wigwam of a Tuscarora chief of our own country, arrows formed according to the fashion of his tribe, which were as accurately proportioned,

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and as neatly trimmed, as any that could be found among the quivers of our clubs.

Columbus found the bow in use among the American islanders, and was struck with the address and power with which they applied it to purposes of offence. He mentions that, on his second voyage, a female Indian shot an arrow through the target of a Spanish soldier, and that one of her companions, while endeavouring to escape by swimming, still continued to use his bow with much effect.

The natives of Brazil, when discovered by the Portuguese, used bows of an ell in length; and of such power, that their arrows, which were armed with fish bones, would pierce the hardest boards.

The Indians residing west of the Mississippi, as we learn from a member of our club, who is entirely familiar with their habits, use bows made of the yellow or "bow" wood, Maclura aurantiaca, of Nuttall. This wood grows only on the Red river and the southern tributaries of the Arkansas; whence it is carried to all the nations residing on the tributaries of the Mississippi.

These bows are comparatively short, seldom measuring more than three feet six inches, and

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are always backed with tendon, taken from the buffalo, and secured on the bow by glue, made from the feet of the same animal. Slips of the same tendon, nicely twisted, form the string. Their size renders them convenient for using on horseback, and their power is such as to drive an arrow completely through the body of the buffalo.

An esteemed bow, but not so frequently used, is made of elk horn, backed in the same manner as those described above.

The arrows are about twenty-six inches long, and are tri-feathered in an indifferent manner. The heads are made, by those who can procure it, of iron: a piece of old hoop is the usual substance, ground into a triangular form, and placed in a slit in the end of the arrow, where it is firmly secured by a lapping of tendon. Those used in war are so constructed as to remain in the wound when the shaft is withdrawn: those used in hunting are attached firmly, but their shafts are grooved so as to permit the flow of blood along them.

The bow is usually carried in a case attached to the quiver, both made of the skin of the American panther, or cougar, the tail of which remains attached as an ornamental appendage.

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The nations which reside very far west, and have comparatively little intercourse with the whites, still use the stone heads, which are found so abundantly throughout the country, and in the immediate vicinity of Philadelphia. They are made of various hard stones, such as chalcedony, hornstone, flint, jasper, agate, or quartz, and with such remarkable neatness, that the most ingenious mechanic, with the aid of tools, would find much difficulty in imitating them. The number of these heads, and their general distribution over the surface of this country, furnish evidence of the existence, at a former period, of a numerous race of Indians, whose hunting grounds extended over the vast tract of country, now the home of the American people.

The application of the bow to purposes of war, was introduced into England by the Normans, who owed their success at the battle of Hastings, to the efficiency of their archers. The hero of Sherwood Forest, the renowned Robin Hood, flourished rather more than a century after this,—and still two centuries later, the victories of Creçy, Poictiers, and

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Agincourt, bore testimony to the prowess of the English archery.

The first recognised society of archers, The Fraternity of St George, was incorporated by Henry VIII. with many privileges, about the year 1540; and at the same time, an act of parliament was passed, requiring every man to arm himself with bow and arrows, and all but judges and ecclesiastics to practise at the butts.

Renewed efforts were made in the reign of Queen Elizabeth, to carry this statute into effect. Roger Ascham, who had been charged with the direction of her early studies, and who afterwards filled the station of her Latin secretary, had written an admirable treatise on archery, and was withal an expert in the art. Under his influence, as it is supposed, commissioners were appointed to promote the use of the long bow throughout the realm, and they were directed to return the names and residence of all delinquents to the Queen. But, as the invention of gunpowder became generally known, the bow naturally fell into disuse; and the laws in favour of archery and archers, though now and then recalled to pub-

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lic notice by the favour of some royal patron of wood-sport, were neglected or repealed.

The London archers, however, seem to have retained many of their rights to a late day. The city was bound to provide them with butts and shooting ground; and till after the death of Charles I. this obligation was not unfrequently enforced by judicial decrees, and sometimes by popular violence.

After the restoration, Charles II. made efforts to reinstate the bow in the favour of the people. He was a frequent attendant on the performance of the archers, and actually knighted Sir William Wood for his skill in wood-craft. But the civil wars had made men familiar with the use of more powerful weapons,—the cavaliers prided themselves specially in those amusements, of which the vulgar could not partake,—and the stern spirit of the Puritans tolerated no mere pastimes. Archery, as a matter of course, declined in England; and when the Toxophilite Society was formed in the last century, by the exertions of Sir Ashton Lever, the bow and sheaf of shafts had almost passed away into the cabinet of the antiquary.

The establishment of this society may be re-

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garded as an era in the history of the bow. It no longer claimed the dignity of a weapon for the national defence; but it resumed its pre-eminence among invigorating and graceful recreations. Clubs of archers were immediately collected in different parts of the kingdom,—trials of skill were renewed between the champions of different shooting grounds,—and the feats of the gallant outlaw and his merry men, were acted over again on the green sward, under the patronage of noblemen, and in the presence of the fair. The spirit of these institutions has not since declined, and they have greatly increased in number.

The UNITED BOWMEN OF PHILADELPHIA are, it is believed, the only club which has yet been organized in the United States, for the practice of archery. It dates from the spring of 1828.

The want of a manual for the instruction of the members of this club, led them to charge a committee with the preparation of the following little work. Most of its materials have been derived from a treatise by Mr Waring, the modern English bowyer, or from Ascham's "Toxophilus,"—somewhat modified and ex-

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plained perhaps, by reference to the limited experience of the committee. It has of course little pretension to originality, or to literary character. More than the object of its authors will have been attained, if it contributes in any degree to introduce among our countrymen a fondness for the sports of archery, the best probably of the gymnastic exercises.

Philadelphia, *May* 1830.

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CHAPTER I.

THE ARCHER'S EQUIPMENT.

The LONG BOW should be of a length equal to the height of the archer who uses it: and its strength should be sufficient to throw the arrow at least one third further than the object against which it is directed.

Bows are made of various materials. *Self bows*, as they are termed, are formed from a single piece of tough but elastic wood. Such were the bows of the merry archers of old England, of which the material was the yew tree. But the long known difficulty of procuring wood at once tough and elastic has compelled bow makers to combine two or more substances which possess these qualities sepa-

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rately. Thus, it is common to find bows, of which the body is of lemon, cedar, or some scarcely flexible wood, plated or backed, as the phrase is, by a thin slip of tough ash, glued to it firmly. These are called *backed bows*. One of the best used by the United Bowmen, is of the American locust, and is backed with macerated sinew: it has great power, and restores itself perfectly when unstrung. Backed bows, when not in use, require to be carefully protected from moisture, and from excessive dryness; either of which, by impairing the tenacity of the glue, destroys the bow. If it is kept in a proper situation, a bow will require no oiling or other preservative.

The proper form of a bow, when unstrung, is perfectly straight: though bows, when first manufactured, are sometimes made to bend a little backwards, with a view to give them a greater degree of elastic force. The back or outer part of the bow is always made flat, and

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square with the sides: the inner is generally round.

The extremities of the bow are protected by tips made of horn, of unequal lengths, in which is formed the nock for receiving the string. The lower end of the bow is indicated by the shorter horn.

The HANDLE should not be in the centre of the bow, but under it: thus the lower limb is shorter than the upper one by the depth of the handle, and is therefore made the stronger of the two. If the centre of the bow was in the centre of the handle, both limbs, being of the same length, should be equal in strength, and should, when strung, approach the form of a sixth of a circle. But the position of the hand, while grasping the bow, would in such case render it impossible to send an arrow from the centre, and in fact would make it necessary to raise it about two and a half inches higher, so as to clear the handle. The upper limb con-

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sequently would be more bent than the lower in the act of shooting; and the effect would be irregularity in the range of the arrow, and considerable risk of breaking the upper limb of the bow. As it is important that the arrow should go from the centre of the bow, the handle is placed immediately below it; and as, by this means, the lower limb is shortened, and the stress upon it increased, it is made stronger in proportion; so that when drawn by the string, the bow retains a regular curve, and both limbs exert an equal force.

The Force of a Bow is estimated by the number of pounds weight, which, when suspended from the string, will draw it down to the length of an arrow. This is generally marked immediately above the handle. Fifty pounds is the standard weight; and he is a strong man who can draw one of sixty with ease, as his regular shooting bow. Some few however can use a bow of seventy or even eighty pounds.

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Ladies' bows, it is said, are from twenty-four to thirty-four pounds.

It may be remarked that the archer exerts a degree of force equal to double the weight of the bow; for if he draws one of fifty pounds with his right hand, the left must have the same strength to resist that pull. But the force of his bow is an imperfect criterion of the strength of the person who uses it; for an experienced archer will bend a bow without effort, which, in the hands of an unpractised stranger, of much greater strength, would be entirely unmanageable.

The Bow String is made of catgut, hemp or silk. The English archers generally use one of hemp, bound or whipped with stout sewing silk, for an inch or two directly opposite the upper end of the handle, where the arrow sets upon it, to protect it from wearing away. As the breaking of a string not unfrequently shivers the bow, such an accident cannot be too

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carefully guarded against. It is therefore the practice of many archers, to secure the ends of the string in the same manner.

The United Bowmen have substituted a silk string, made of a number of threads of sewing silk, firmly lashed or whipped together with the same material. Although rather thick, it is perhaps preferable to that used in England, as it is not sensibly affected by moisture.

Whatever the string be made of, it should not be permitted to untwist, or become loose and uneven. This is prevented by waxing it.

The string, when the bow is not in use, should be attached, by a timber noose or knot, (Vide Plate) to the lower end, and should be looped loosely, at the eye or noose, to the notch at the top of the bow.

Arrows are made of wood selected for its tenacity and lightness. The English use the

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linden; but the linden of America is of too soft a texture for this purpose. The United Bowmen prefer the white holly, which is rather more dense, and permits the arrow to be made thinner.

The head or pile of the arrow is guarded by a small ferule or ring of metal, which is sometimes slightly pointed. The notch at the smaller end, which receives the string, is called the *nock*. It is generally made of horn, neatly inlaid and secured in the wood. The nock should be exactly as wide as the string of the bow: not so large as to permit the arrow to play loosely, nor so small as to require force to push it on; but just wide enough to press slightly on the string.

The length of the arrow is determined by that of the bow. The arrows of ladies' bows, or of bows five feet long, are twenty-four inches. Bows, under five feet nine inches, have arrows of twenty-seven inches; and for

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those above five feet nine inches, we use arrows of twenty-eight, twenty-nine, and even thirty inches. But arrows of thirty inches can be used to advantage only with very long bows, and, by persons who have a great length of arm. There is, besides, something of risk to the bow in drawing so long an arrow to the head;—indeed few bows are safe, when drawn to the distance even of twenty-nine inches. With bows therefore not exceeding five feet ten inches, it is recommended that no arrows be used above twenty-eight inches long.

Arrows that are intended for very long flights, may perhaps be considered an exception. These, which are called *flight arrows*, are longer and lighter than those that are used in ordinary shooting; but they ought not to be used unless with bows of more than common toughness.

Arrows are of different shapes. Some are thick at the head or pile, and gradually de-

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crease to the nock; others are thickest near the middle; and some again are stoutest close under the feathers, and taper off to the head.

An advantage attending the blunt head is, that when shot into the target frame or any other wood work, it does not enter so far as the sharp, and is therefore more easily extracted. But archers have various opinions on this point; and their differences may be pardoned, inasmuch as arrows of any shape, if they are only straight, will fly well at almost any distance within the range of the bow.

The arrow is feathered near the nock in three equidistant lines; two of which are generally of one colour, and the third different. The odd feather is placed in a line with one projection of the nock, and is called the cock feather:—in preparing to shoot, it is always placed uppermost on the bow. The feathers should be stiff and regularly trimmed. The English archers use those of the goose or tur-

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key; but the quill feathers of the eagle, the swan, or the blue heron are preferable.

The weight of the arrow which should be used must depend in a great measure on the power of the bow. The English archers express it in terms of the coin of the realm, valued at its standard weight. Thus, it is said that arrows vary in weight from three to twenty shillings. Mr Roberts, in his English Bowman, page 153, gives the following table for selecting arrows.

For shots of 30 yards, weight from 4*s*. to 6*s*.
For shots of 60 yards, weight from 3*s*. 6*d*. to 5*s*. 6*d*.
For shots of 90 to 120 yards, weight from 3*s*. to 4*s*. 6*d*.

But all this is of little practical value. Bows may be equally well calculated for either of these distances, and yet require different arrows; and it is not common to find two archers who select the same arrows, even for the same bow. The strength of the bow is of course to be considered, and whether it has

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a sharp or dull loose; or in other words, whether it casts quickly, or the reverse: for two bows of the same weight will differ much in the quickness of their motion, and consequently in the distance to which they send the arrow. And then, peculiarities may, and in fact almost always do exist, in the archer's manner of drawing his bow, of loosing the string, of elevating at the mark: all of which should have their influence in determining the selection of his arrows. Attentive practice will decide best in matters of this kind. The arrows of the United Bowmen vary in weight from three quarters to one ounce avoirdupois.

The archer's arrows, that are intended for the same distance, should have the same form and weight: a change in either of these particulars will have the effect of varying the line of flight, and of course will destroy the accuracy of the shot.

The London Toxophilite Society, though

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they shoot with two arrows only, have always a third of the same kind in their pouch for use, in case either of the others is accidentally broken or deranged. Thus they denominate three arrows a pair: accordingly the expression is sometimes found to have this sense in treatises on archery. The more common term however is a *pouch* of *arrows*.

The United Bowmen's pouch contains three arrows.

The BRACE is a small shield of smooth stout leather, which is buckled on the inner part of the left forearm in shooting, to prevent its being injured by the stroke of the string. In former times, many archers did not wear anything to protect the arm, but braced the string so high from the bow, that when loosed it could not reach the arm. But this would seem to be a bad arrangement, and must often endanger the bow. Besides, a bow has less play, when overstrung, and of course cannot give an

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arrow its greatest range. For these two reasons, modern archers generally wear the brace.

A gentleman's bow is said, by Mr Waring, to be overstrung, when the middle of the string measures from the handle of the bow more than six inches; and a lady's bow, when more than five.

The SHOOTING GLOVE is intended to save the fingers from being hurt by the friction of the string as it passes over them. It consists of three fingerstalls of stout leather, sewed to three thongs, which unite at the back of the hand in a strap that extends to the wrist, where it is sewed to another that buttons round the wrist. Some archers use only two fingers; but this is not generally practicable, except with weak bows, or in short shooting. To a strong bow, at the full range, the third finger is an important aid. The stalls should not project more over the fingers than is

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necessary for their protection as the string glides by.

The BELT buckles round the waist; from which on the right side is suspended the pouch or bucket to receive the arrows intended for present use. This is a necessary appendage; as for the want of it the archer must lay his arrows on the ground, and risk their being trod upon and broken.

The TASSEL is suspended from the left side of the belt; and is used to cleanse the arrows as it is drawn from the ground, before it is placed in the pouch.

The GREASE BOX is suspended from the middle of the belt; and contains a composition for anointing occasionally the fingers of the shooting glove, that the string may pass off the more readily.

The QUIVER is never worn but in roving.

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In shooting at targets or butts, it is placed by the side of them, at a few yards distance, to contain a reserve of arrows.

Quivers were formerly made of wood, and afterwards of leather; but, for some years past, tin quivers have been generally substituted, as being lighter, more secure, and less expensive.

The ASCHAM is a long upright case, used by the English archers, for the purpose of containing the whole of their accoutrements. It is not properly a part of the archer's equipment.

The SHOOTING DRESS adopted by the United Bowmen is at once convenient and economical. It consists of a light sporting cap of black bombazet, an iron grey jacket bound with black braid, and a corresponding under dress. It is undoubtedly better suited to our climate in the shooting season, than the green

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broad-cloth coat and slouched hat with plumes, by which the English clubs are distinguished.

The SACK is large enough to hold the shooting dress; and it contains, in addition, a small flat file for widening or repairing arrow nocks, an additional bow string, a spare ferule or two, a bunch of stout sewing silk, and a wax ball. These complete the equipment of the archer.

By the rules of the United Bowmen, the property of each member is distinguished by some simple badge, as the circle, an arrow-head, the triangle, &c. which is marked upon his bow near the handle, upon his arrows above the feathers, upon his brace, belt, quiver, and generally on all his accoutrements. It is also the mark, by which his shots are indicated on the target, and on the record card.

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CHAPTER II.

THE ARCHER'S DRILL.

We suppose that the intended archer has now provided himself with his accoutrements, and that he comes to the shooting ground to make his first essay. He remembers that the flat side of his bow is to be the outer, and that the inner side is the round one; or if he forgets that which we have so lately taught him, he begins by bending his bow in the direction which is the easiest, and probably breaks it at once into many pieces. Should his bow be so fortunate as to escape this risk, the first lesson of the drill will be the art of stringing it. He will not find fault with us for calling it an art, after he has made one or two attempts to string his bow without instructions.

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STRINGING THE BOW. Having first seen that his string is secured at the lower end, that it is not twisted round the bow, and that the eye or noose is placed as nearly in the nock as the string permits,—he will now be pleased to grasp the bow by the handle with his right hand, the flat or outer part of the bow turned towards his person, and the end with the shorter horn turned downward. He will take care that he does not let his hand slip up above the handle, which is the centre of action; as by so doing he will probably harm his bow, and withal increase greatly the labour of stringing it. He will next place his right wrist firmly against his side above the hips, and bring the lower end of the bow, to the ground, against the inside of the right foot, which must be planted firmly, and may be turned a little inwards to prevent the bow from slipping.

Then let him advance the left foot about thirty-six inches, remembering that, although

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the right knee may be bent, the left must be quite straight during the whole operation of stringing,—place the centre of the left wrist on the upper limb of the bow, the tip of the thumb resting on one edge of it, immediately below the eye of the string, and a knuckle of the fore finger resting in like manner on the other edge :—the left arm in the mean time straight.

He is now ready to string the bow. To effect this, let him pull the bow briskly with the right hand, keeping the wrist still close to his body,—press down the upper limb with his left,—sliding the wrist towards the upper horn at the same time, and by means of the tip of the thumb, and knuckle of the fore finger, driving forward the eye of the string to the notch of the bow. As soon as the eye is fairly in the notch, the bow is strung. During this whole process, the fingers of the left hand, except the fore finger, are not to be in use, but should be stretched out.

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Simple as all this is to the archer, we confess it has its embarrassments for the learner. Sometimes he will find that the eye of the string, as he is urging it to the notch, has slipped under his thumb and fore finger, and cannot be driven home: let him in this case begin the operation over again with all patience, and by pressing his knuckle and thumb rather harder on the edges of the bow, endeavour to prevent the string getting under them again. On a second attempt, the exertion of stringing, especially if the bow is strong, may full likely force the right foot from its place, shortly before the operation is concluded: if so, let him have patience again, for the fault was in his foot, not in the bow, and let him repeat the experiment, after placing his foot against a tree or other immovable object. Or it may be, that in his anxiety to prevent the string slipping a second time under the knuckle of his fore finger, he supports and follows it up with the other fingers of his hand, and thus permits them to pass round the

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bow to the inner side. Should accident or awkwardness now permit the eye of the string to miss the notch of the bow, he will of a certainty find, that the string will catch the trespassing fingers on its return, and hold them in most painful durance between it and the bow. In this dilemma, as the fingers cannot be withdrawn until the bow is bent, and as he will find it difficult to bend it with one hand a prisoner, we counsel him to invite some kind friend to his rescue, and to do us the justice of remembering, that we have told him already, his fingers had no business on the bow, and should have been stretched out during the whole process.

The manner of stringing which we have described is the best, and indeed it is the only safe one: the learner, therefore, must not suffer his impatience, after a failure, to tax his ingenuity with devising others. Repeated trials will convince him of this; and that, without breaking his bow, which is the ordinary penal-

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ty of innovations in archery. If he does not succeed for a while, let him not be discouraged. One of his associates may aid him occasionally, by pressing down the top of the upper horn with his fore finger, taking care always to keep it clear of the notch. But he is no archer, until he can string his bow unaided.

The attitude in stringing the bow is well represented in the frontispiece. The third figure of Plate II. shows the position of the fingers.

The distance of the string from the centre of the bow, when braced or strung, should not be less for a long bow than five inches and a half, nor more than six; but for a bow of five feet, the distance ought not to exceed five inches.

Unstringing. The attitude and action in unstringing are the same as in stringing, with this difference only, that the left wrist

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must be closer to the top of the bow, so as to permit the fore finger to reach round the bow, and the tip of it to fix itself in the eye of the string. The bow is pulled up briskly at the middle with the right hand, and the upper limb is pressed down by the wrist of the left as in stringing; and at the moment of the string becoming slack, the tip of the fore finger brings the eye out of the notch.

Another way of unstringing the bow is by placing the short horn on the ground, the flat side of the upper limb on the palm of the left hand, the string upwards, and pressing with the right hand upon the handle. When the string slackens, the thumb of the left hand, which is close to the eye of the string, brings it out of the notch.

When the bow is strong, the operations of stringing and unstringing will be made easier by quickening the motion.

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ATTITUDE AT THE SHOOTING STAND. It has been often said, that the position of the archer when shooting, is among the most graceful of which the human body is susceptible; and certainly the most admired statue of antiquity supports the remark. But our learner would justly expose himself to a smile, were he to attempt a display of attitudes at the shooting stand. He has already discovered, that something of effort is required in preparing his bow for use, and he will find that grace in shooting is only to be obtained by observing long established rules, and accustoming his muscles to tolerably severe action. He must submit himself to the drill, and be content to take his place for a while among the awkward squad.

While preparing to shoot, the archer stands with his left side towards the mark, his heels six or seven inches apart, his body perfectly erect, and his head inclining a little downward over the breast.

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The bow is at first held horizontally with the string uppermost, the top of the bow in front; the top of the hand coinciding with that of the handle. The right hand moves back to the pouch, and draws out an arrow by the middle. The arrow is carried forward under the string, and above the bow, still held by the middle, till the head reaches the left hand, the fore finger of which is then thrown over it, and the right hand moves back to the nock. The arrow, held by the thumb and finger of the right hand, is now slid downward upon the bow, the cock feather uppermost, and the nock is placed upon that part of the string which is exactly opposite the top of the handle, where it is retained between the first and second fingers of the right hand, the balls of which rest upon the string. The fore finger of the left hand is then removed and encircles the bow.

The string should not be held beyond the first joint of the fingers; as the effort to dis-

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engage them, when prepared to loose, is apt to force the string out of its position, and thus destroy the aim.

The Loose. The face is now turned full to the left: the left arm is straight, and the hand, still grasping the bow at the handle as before, raises it to a vertical position. At this time the arm is extended towards the mark, but inclined a little forward and elevated nearly to the height of the ear; and the hand is bent well back at the wrist, so that the strain in shooting may fall upon the palm of the hand.

As the left hand raises the bow, the right should begin to draw. It is improper to elevate the bow quite undrawn, for the right hand, in reaching to the string, deranges the position of the body. Our best archers, while raising the bow, draw the string three quarters of the intended distance,—then pause to take aim,—then draw full to the head, and

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instantly loose; for the bow should not be kept on the stretch longer than a second or two, for fear of breaking.

The thumb is not used in pulling the bow string, but the three first fingers; and if the archer can draw his bow with two fingers, it is still better, as the loose is more immediate and complete.

The bow need not be held very tight; and when drawing it, though the whole of the hand should give support and steadiness at the handle, the part between the thumb and fore finger should exert the most pressure.

The nock of the arrow in shooting is brought up towards the ear, not to the eye; and the aim is taken, not along the arrow, but a little to the left of the knuckles. Nor must the bow be so held, as to bring the head of the arrow in a line with the eye and the mark, as

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the arrow in that case will range considerably to the left of the mark.

Old Roger Ascham, whose 'Toxophilus' may claim for him the title of the Izaak Walton of archery, has given abundance of excellent advice on the subject of the aim. We cannot follow him through all his learning about the wind and the season, both of which he tells us should be especially noted before the archer opens his quiver for the contest; but we venture to extract a few of his remarks.

'The chief cause,' he says, 'why men cannot shoote strait, is because they looke at their shafte; and this fault cometh because a man is not taughte to shoote when he is younge. If he learne to shoote by himselfe, he is afraid lest he pull the shafte through the bowe, and therefore looketh always at his shafte: ill use confirmeth this fault as it doth many more.—Having a man's eye always on his marke, is

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the onlye waye to shoote strait; yea, and I suppose so redye and easye a waye, if it is learned in youth and confirmed with use, that a man shall never misse therein. Some will wonder, why, in casting a man's eye at the marke, the hand should go strait: surelye if it were considered, the nature of a man's eye, there should be no wonder; for this I am certaine of, that no servant to his master, no childe to his father, is so obedient as everye joynte and peece of the bodye is to do whatsoever the eye bids. The eye is the guide, the ruler and the succourer of all the other partes. And in fence and fighting, as I have heard men say, if the eye bid the hand either bear off or smite, or the foote either go forward or backward, it doth so: and, that which is most wonder of all, the one man looking stedfastlye at the other man's eye, and not at his hand, will as it were read in his eye where he purposeth to smite next; for the eye is nothing else but a certaine window for wit to shoote out her head at.'

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He would, perhaps, permit the young archer, if the weather is rough, sometimes to 'look at his shafte head, at the loose, for the better keeping of a lengthe,'—but he takes care to remark, that 'it hindereth excellent shooting; because a man cannot shoote strait perfectly, except he look at his marke,'—and he adds, 'if you marke the weather diligentlye, keepe your standing justlye, hold and nocke truely, drawe and loose equallye, and keepe your compasse certainlye, you shall never misse of your lengthe.'

Many beginners are tempted to hold out the left fore finger, when drawing the bow, to keep the arrow from falling off the hand. The practice is somewhat dangerous; for if the arrow is drawn to the head, it is not improbable that in loosing it, the point may wound the finger. It is besides altogether unnecessary. The arrow slips in consequence of the fingers pressing too much over the string, or perhaps of their being bent at too

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acute an angle at the upper joint. Either of these causes will slightly twist the string, which as it turns will bear off the arrow from the hand. The mistake is corrected at once by holding the fingers more open at the joint, and taking care to draw in the straight line from the left hand to the ear.

The young archer may be reminded, that when shooting with a bow, of which the handle is not in the centre, he must of course be careful to hold the longer limb uppermost: for if he attempts to shoot with the bow reversed, it will scarcely escape being broken; as he is in fact drawing a shorter bow with a shortened string, and to the length of the same arrow.

He must not fail to remember also, that his arrow is to be nocked on the part of the string directly opposite the top of his left hand: otherwise the bow will be jarred at the moment of shooting, and the arrow will vibrate or hobble in its flight.

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These observations comprise all that we find it necessary to present under the head of the archer's drill. If they are carefully regarded at first, the progress of the learner will be rapid and certain, and the exercise will be as graceful as it is invigorating. But he must not expect, that he is at once to become a finished archer: he will have succeeded better than many who have gone before him, if, at the end of his first season, he can lodge more than a single arrow from a pouch, in the target at a hundred yards.

The caution cannot be repeated too often, that he should beware of forming bad habits. Ascham has drawn a ludicrous picture of the 'discommodityes which ill custome hath graffed in archers,' for the accuracy of which few clubs are unable to vouch. 'Some,' says he, 'shooteth his head forwarde, as though he would byte the marke; another stareth with his eyes, as though they should flye out; another winketh with one eye and looketh with

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the other; some make a face with wrything their mouth; another byteth his lips; another holdeth his neck awrye. In drawing, one will stand pointing his shafte at the marke a good while, and by and by he will give him a whippe, and away or a man witte: another draweth softlye to the middle, and by and by it is gone you cannot know howe: another draweth his shafte low at the breast, as though he would shoote at a roving marke, and by and by, he lifteth his arm to the height: one maketh a wrynchinge with his backe, as though a man pinched him behind: another coureth down, and layeth out his rumpe, as though he should shoot at crowes. Some drawe too farre, some too short, some too quicklye, some too slowlye, some hold over longe, some let go over soone. And afterwards, when the shafte is gone, men have many faultes, which evill custome hath brought them to, and speciallye in cryinge after the shafte, and speaking wordes scarce honest for such an honest pastime. And besydes those which

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must needes have theyr tongue thus walkinge, other men use other faultes. Some will geve two or three strydes forwarde, daunsinge and hoppinge after his shafte, as longe as it flyeth, as though he were a madde man. Some, which feare to be too farre gone, runne backwarde, as it were to pull his shafte backe. Another runneth forwarde, when he feareth to be shorte, heavinge after his armes, as thoughe he woulde helpe his shafte to flye. Another wrythes, or runneth asyde, to pull in his shafte straight. One lifteth up his heele, and so holdeth his foote still, as longe as his shafte flyeth. And manye other faultes there be, which now come not to my remembraunce. Thus, as you have hearde, many archers, with marringe theyr face and countenaunce, with other partes of theyr bodye, as it were men that should daunce antiques, be farre from the comely porte in shootinge, which he that would be excellent must looke for. Of these faultes I have very manye myselfe, but I talke not of my shootinge, but of the general nature

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of shootinge. Now ymagen an archer that is cleane without all these faultes, and I am sure every man would be delighted to see him shoote.'

GENERAL DIRECTIONS. Great caution should be used in withdrawing the arrow from the ground or mark. To take hold of the arrow by the middle or near the nock, as unskilled shooters are apt to do, sometimes breaks it, often bends it, and almost always injures the feathering. If the arrow is in the mark, or in any firm substance, it should be taken hold of as close to the head as possible, and turned before an attempt to draw it out. If it is in the ground, it should be taken hold of as before, and carefully drawn out backwards before it is raised. If, in either case, it cannot be withdrawn by a moderate exercise of strength, it should be dug out with a knife. After it is drawn out, it should be wiped clean with the tassel previous to being replaced in the pouch.

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Before the archer goes into the field, he should see that his bow and accoutrements are in complete order, that his arrows want no piles, that the feathering is entire, his bow string perfect, his grease box filled, &c.

When the shooting is finished for the day, or even suspended, it is best to unstring the bow at once; but in going from mark to mark, it is unnecessary. Before the bow is returned to its case, it should be well rubbed with a dry cloth; especially after rainy or hazy weather.

A well proportioned bow, when the arrow is drawn to the head, sustains a flexion fully equal to seven-eighths of its power of resistance. He who draws his bow further, has determined that it is not worth preserving. A bow ought never to be drawn without having its proper arrow in it: it is a guide to the arm and warns us when to stop.

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A gentleman ought never to draw a lady's bow, even with its appropriate arrow. It yields so easily to his pull, that he draws it unconsciously beyond its power.

He who draws a bow in a room, should have his back to the mirrors and windows, and to every thing liable to be injured by a splinter from a breaking bow. He should be still more mindful, not to draw when another person is standing before him: if a bow breaks, the pieces fly forward with great force to a considerable distance, and may seriously injure the bystander. The shooter himself is generally safe, as the pieces do not often fly towards his person:—sometimes however his head and hand share the consequences of his carelessness.

Above all things, an archer should never lend his bow: and it is therefore a standing rule among all the clubs, however welcome

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visiters may be, that no visiter shall be permitted to nock an arrow, or draw a bow.

In selecting his bow for practice, the archer should not be too anxious to save himself exertion. A weak bow, or one merely strong enough at first, is rarely a good one after a few months use. It is even, says old Ascham, as a soft spirited boy when he is young: an unrulye boye with right handlinge proveth oftenest of all a well ordered man.

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CHAPTER III.

SPORTS OF ARCHERY.

TARGET SHOOTING. The target generally employed in this amusement is circular, about four feet in diameter, formed of painted canvass or oil-cloth, fastened on a bass of straw, which is wrought together into a flattened mat, resembling the texture of a beehive. It is supported by a frame of soft wood, made light, of the form given in Plate I. and so arranged as to present the smallest possible surface in the direction of the arrow.

The target is painted in concentric circles. The centre is gold, of the diameter of about nine inches and a half. This is surrounded by a red ring, four and three quarter inches

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broad; and this again by a white, a black, and a light blue or outer white ring, each of the same width. The remaining space is painted dark green, and is called the petticoat or curtain.

An arrow in the gold counts nine,—in the red, seven,—in the white, five,—in the black, three,—in the blue, one,—in the curtain, nothing. An arrow on the edge of a circle, or not completely within it, according to the United Bowmen, counts as if it were entirely without it: a different rule is however admitted among many of the English archers.

Two targets are used. They are placed, facing each other, at the distance of eighty, a hundred, or a hundred and twenty yards. The ordinary range of the arrow flight, at the practice meetings of the United Bowmen, is a hundred measured yards.

The archers of the Scotch Guard, it is said,

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are in the habit of shooting at the distance of a hundred and fifty yards; and it is well known that the old English archers were not permitted to practise at butts which were closer than two hundred and twenty yards. This however is a much greater range, than consists with accurate shooting; and if the information which we have received is to be relied on, the body of the modern Scotch archery are more distinguished for the length, than for the certainty of their shots. Some among them have doubtless been known to place their shafts in a mark of thirty inches square, from a distance of two hundred yards; but such instances cannot be common. The willow wand, that Sir Walter Scott chooses for Robin Hood's mark in the sports at Ashby, was placed at but five score yards,—and even at that distance, his success is sufficiently incredible.

In his earlier practice, the young archer

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may very well test his strength for a while at a target of seventy or eighty yards.

Ladies' targets are said to be considerably smaller than those for gentlemen, and they are placed at distances of fifty and sixty yards.

By the regulations of the United Bowmen, each member in succession acts on practice days as captain of the target. He calls the roll of the club at the hour of meeting, details the members who are to mark distances and to fix the targets, and throughout the sports of the day is the absolute commander and umpire.

The ground being measured and marked, the targets are placed in such a line as that the sun shall not be in the eyes of the archers at the stands; and the members take stations in a line at the left of one of the targets. At a signal, they advance successively in divisions of two to the front of the target:—the members of the division shoot alternately, the right

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first; each taking care to nock, while the other is shooting, so as to save time:—and immediately after shooting the third arrow of the pouch, the division draws off to the right of the target.

As soon as the last division has left the stand, the divisions move regularly across the field to the other target,—taking care, as they approach it, to avoid treading upon the arrows. The captain marks each hit on the target with the appropriate sign of the archer, and makes a corresponding note on the record card. The members collect their arrows, and again take places at the left of the target.

The captain shoots either alone, or as a member of the first division.

No one is allowed to place himself in advance of an archer at the stand, and no speaking is permitted at the moment of shooting.

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An arrow, which falls from the string, may be taken up if the archer can reach it with his bow: otherwise, it is reckoned as a shot.

An arrow which passes through the target, or falls to the ground after striking it, counts as a hit, if the archer can show the mark.

The RECORD CARD will be fully understood by examining the second figure of Plate II. It is a card, ruled in squares, with the marks of the several archers in the line at the left, and the names of the circles in the line at the top. At the conclusion of each day's sport, the number and value of each archer's hits are marked by the captain in the two columns at the right. The record card given in the plate shows that A. has placed two arrows in the gold, six in the red, &c. &c. numbering in all twenty-eight, of the value of one hundred and eighteen. B. has twenty-nine hits, counting one hundred and twenty-one, and C. twenty-three, counting one hun-

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dred and one. A pin is attached to the record card for convenience of notation: the mark of a pencil would be liable to be effaced in the course of the shooting.

As a principal object of the sport is exercise, each archer should collect his own arrows, and shoot alternately from each target. The number of arrows should not exceed three, as it increases the chances of losing them, and the fingers of a person, who is not accustomed to labour, are apt to be chaffed by the bow-string, if too constantly employed.

The grass should be kept very short in the neighbourhood of the targets; and it is generally best to shoot with a little elevation, lest the arrow should be lost, or injured in its feathering: in point-blank shooting, it will often completely bury itself in the ground.

Archers in selecting their shooting-grounds are very properly careful to avoid the vicinity

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of public roads, and, in fact, every situation in which persons may incautiously approach their targets. He is a weak bowman, whose arrow would not be dangerous after a flight of even a hundred and fifty yards.

PRIZE SHOOTING. The archery clubs have occasional meetings for prize shooting. The Toxophilites of England, the Scotch archers, and our United Bowmen, have two prizes: the first of which is awarded to him, whose whole number of hits counts the highest; the other to the arrow nearest the centre of the gold. Our first prize has been a cup, a silver arrow, or a bugle,—the second, a dozen of arrows or a bow. The former is of course worn by the best marksman of the day,—the latter is often the encouraging reward of a happy shot by an unpractised archer.

Mr Roberts, in his English Bowman, tells us that a member of the Toxophilite society won the first prize in 1795, by placing four

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arrows in the gold, seventeen in the red, nineteen in the white, twenty-four in the black, and twenty-six in the outer white; in all, ninety hits, counting three hundred and forty-eight. This was probably excellent shooting, for there are fine marksmen among the Toxophilites; but we should estimate its excellence more fully, if we were told the distance of the targets, and the time occupied in the contest. At a prize meeting of our own club, after a single season's practice, five arrows were in two hours placed in the gold, nine in the red, ten in the white, fifteen in the black, and twenty-three in the blue; sixty-two hits, counting two hundred and twenty-six:—this is not a great day's work, but it was a creditable performance for young archers.

Butt Shooting. Butts are structures of turf, about seven feet high, and eight feet wide at the base, narrowing towards the top. They are generally from three to four feet in thickness. A set of butts consists of four, so plac-

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ed as that one shall not intercept the view of another from either of the stands.

The greatest distance between them is from one hundred and twenty to two hundred feet; but two of the butts are so situated as to give marks at one fourth, one half, and three fourths of that distance. This will be perceived at once by an examination of fig. 4 of Plate II. where the small circles represent the stands, and the oblong figures the butts. Two of them, it will be seen, are exactly opposite each other: each of the others should be a few yards out of the line of range.

The mark is a round piece of pasteboard, fastened by a peg in its centre to the butt. Its size is proportioned to the distance from the shooting stand,—the mark at two hundred yards being thirty inches square,—at one hundred and fifty yards, twenty-two and a half inches,—at one hundred yards, fifteen inches,—at fifty yards, seven inches and a half. If

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the greatest distance is but one hundred and twenty yards, the largest mark is sixteen inches.

No arrow is counted, that strikes outside of the pasteboard. The greatest number of hits decides the winner; or if two have the same number, the victory is with the arrow which has struck nearest the peg. If this cannot be determined, a single arrow is shot by each of the claimants, and he who hits nearest the peg, or the mark, or even the butt itself, gains the day.

The expression, a single end, is applied to shooting at a single mark: a double end is shot, when the arrows are shot back again at the same distance.

As few archers shoot equally well at different distances, it is common, with the view of giving to each the same chance of winning, to shoot an equal number of ends at each of the butts.

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The prize shooting of the Scotch Guard is sometimes at butts. Anciently, a goose was enclosed in turf, with only a small part of the head exposed, and the prize was won by him who pierced it with an arrow. The modern practice is to shoot at a small glass globe, fixed in the centre of the mark on the butt; and the successful archer, after receiving his medal, carves a goose at the dinner table. But the sport is still called shooting for the goose.

ROVERS. Archers, who shoot from field to field as they walk, selecting as their marks trees and other conspicuous natural objects, are called a roving party, and their sport a match at rovers. The distance of course depends on circumstances; but the spirit of the amusement requires that the marks should never be closer than a hundred and fifty yards.

No arrow counts, unless it strikes within five bow lengths of the mark. With this qualification, the nearest arrow counts one;

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and if the same archer has two or three or more arrows nearer than any of those of his companions, he counts accordingly.

In measuring the distance of an arrow from the mark, and in comparing the positions of two arrows, the centre of the mark is understood to be at the height of a foot from the ground. Where a tree is the mark, therefore, an arrow in a branch is less valuable than an arrow on the ground, which happens to be nearer the mark of a foot from the base; and an arrow that has even struck the trunk of the tree, if more than five bow lengths above the true mark, will count nothing, though it be the nearest.

In measurements to ascertain whether his arrow is within five bow-lengths, each archer uses his own bow, and measures to the nearest part of the arrow:—but when the question is between two arrows, the same bow must be used in measuring the distances of both, and

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the measurement is to the part of the arrow, which is visible, nearest the pile.

The archer, who counts by a shot at a roving mark, selects the mark for the next shot, and continues to select the marks for the company, till some other counts.

If an archer supposes that the mark chosen is beyond the range of his arrow, he may claim to walk in closer before shooting;—but in such case, he is bound to use a flight arrow, and to elevate to an angle of forty-five degrees.

The game of single bows is seven; but where two shoot against two, as partners, the game is thirteen. If three shoot against two, the game of the larger party is thirteen, and of the smaller, nine. Inequality of skill among the competitors is compensated, as at other games, by an allowance of odds in favour of the weaker.

The quiver is worn in roving; and it should

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be well filled, as arrows are not unfrequently lost.

A party should not consist of more than six:—if the number in company is greater than this, it should form two parties, which may follow each other. But care should be taken, that they do not come within bow-shot of each other, for fear of accidents.

CLOUT SHOOTING. Clouts are marks, about twelve inches in diameter, generally made of pasteboard, and secured immediately above the ground by a cleft stick, at distances of one hundred and fifty to two hundred yards.

The order of shooting in this sport is the same as in target shooting: but the manner and rules of counting are the same as in shooting at butts; the only difference being that, as the distance in this case is uniform, no arrow counts unless within three bow lengths of the clout.

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Sometimes the clouts are made of cloth, secured at each side to a stick. In this form, they can be rolled up, and are very portable; and they are in consequence much used by archers, who have not convenient grounds in the neighbourhood for the erection of butts or targets.

The game is the same as in butt shooting.

FLIGHT SHOOTING. This is merely a trial between archers, which can throw his arrow to the greatest distance. The longest and lightest arrows are used for this purpose. But a careful archer is rarely tempted to engage in this sport, as he jeopards his bow, and almost certainly loses some of his arrows. Those who practise it count seven as the game.

THE END.

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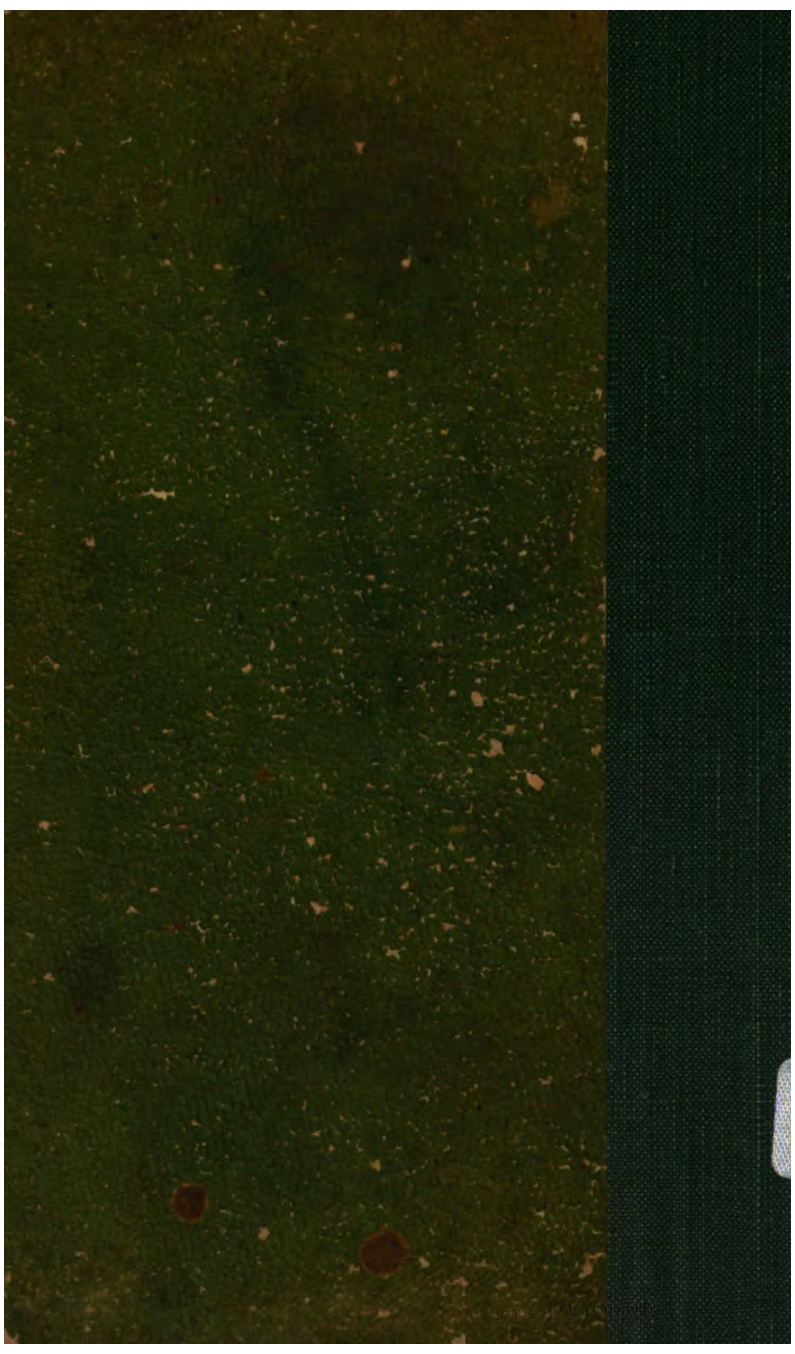
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